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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,007	09/19/2005	David Andrew Horsnell	16441US01	4912
80853	7590	10/28/2009		
Danaher Product ID 1500 Mittel Blvd Wood Dale, IL 60191			EXAMINER WIECZOREK, MICHAEL P	
			ART UNIT 1792	PAPER NUMBER
			MAIL DATE 10/28/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/521,007

Applicant(s)

HORSNELL ET AL.

Examiner

Michael Wiczorek

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8 and 10-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-5, 8 and 10-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Status of Application

1. By amendment filed June 25, 2009, claims 1, 3, 5, 8, 10, 11, 13, 16, 17 and 19 have been amended. Claims 6, 7 and 9 have been cancelled and claims 20 through 22 are new. Claims 1 through 5, 8 and 10 through 22 are currently pending.

Response to Arguments

2. Applicant's arguments, see pages 5-7, filed June 25, 2009, with respect to the rejection(s) of claim(s) 1-19 under 102(c) and 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of new prior art necessitate by the amendments made to the claims.

Information Disclosure Statement

3. The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications,

applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

4. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. On Page 10 of the specification an International Patent Application is disclosed as pertinent prior art but because this prior art reference has not been included within a proper information disclosure statement it has not been considered.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 13, 14, 17-19 and 21 rejected under 35 U.S.C. 102(b) as being taught by Hale et al (U.S. Patent # 5,575,877).

Hale teaches a method of transferring an image printed onto a medium to an absorbent or porous substrate. The method comprises first applying an image or design onto a carrier sheet in the form of a medium. Then a cover coat in the form of a polymeric surface preparation material is applied over the image or design. Both the image and cover coat/surface preparation material are applied by a printer. (Abstract and Column 2 Lines 25-35)

Hale further teaches that suitable printers for applying the image and surface preparation material include ink jet printers (Column 3 Lines 26-30, Column 4 Lines 58-67).

As for claims 2 and 14, Hale teaches that suitable ink jet printers used in the taught method include bubble jet printers (Column 7 Lines 30-67) and bubble jet printers are a known type of drop on demand printers.

In the case of claim 13, as was discussed above Hale teaches coating a carrier sheet with pre-printed images with a cover coat to cover the area of the carrier sheet to which the images have been applied and that the application of the cover coat is by an ink jet printer.

Hale further teaches applying the transfer in the form of a medium with an image and cover material printed onto its surface to a ceramic article and then heating the article to fire off transfer the image to the article (Column 4 Lines 42-57).

As for claims 17 and 18, Hale teaches that the liquid used to form the images printed by the ink jet printer have a viscosity of 4 to 70 cps (Column 8 Lines 21-29), which is within the claimed ranges of less than 300 cp and less than 200 cp.

In the case of claim 19, since Hale teaches the method of claim 1 it also teaches an ink jet printer configured to perform the method of claim 1.

In the case of claim 21, as was discussed above in the claim 13 rejection, Hale teaches the steps of applying the transfer to a ceramic article and then heating the article to fire or transfer the image to the article.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 3-5, 8, 10-12 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hale et al as applied to claims 1 and 14 above, and further in view of Endo et al (U.S. Patent # 4,723,129).

The teachings of Hale as it applies to claims 1 and 14 have been discussed previously. Though Hale teaches the claimed methods of forming a transfer using an ink jet printer,

specifically a drop on demand printer in the form of bubble jet printers, it does not teach the operation parameters disclosed within the claims.

Endo teaches an invention related to bubble jet printers and processes of using (Abstract and Column 1 Lines 16-19). Endo further teaches that the dimensions of the droplets are dependent on the diameter of the nozzle orifice and the pressure of the liquid. Endo further teaches size of droplets and number thereof generated per unit time is determined by the frequency and that the pressure affects the rate at which the droplets are released from the orifice. (Column 6 Line 45 through Column 7 Line 35)

Thus Endo teaches that nozzle orifice size, the operational frequency and the operational pressure of the jet printers are known cause effective variables.

It has been determined that it would have been obvious to one having ordinary skill in the art to have determined the optimum values of cause effective variables through routine experimentation in the absence of a showing of criticality. *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990)

Thus at the time the present invention was made it would have been obvious to one of ordinary skill in the art to determine optimum nozzle orifice sizes through routine experimentation thus achieving nozzle orifice sizes of between 125 and 500 micrometers for both the first and second drop on demand ink jet printers.

Furthermore, at the time the present invention was made it would have been obvious to one of ordinary skill in the art to determine optimum operational frequencies for each printer through routine experimentation thus achieving a frequency of between 2 and 4 kHz for the first drop on demand ink jet printer and a frequency of between 600 and 2000 Hz for the second drop

on demand ink jet printer. Furthermore, Endo specifically teaches that suitable frequencies range from 0.1 to 1000 kHz (Column 7 Lines 16-23).

Furthermore, at the time the present invention was made it would have been obvious to one of ordinary skill in the art to determine an optimum operational pressure for the second drop on demand ink jet printer (i.e. the one used to coat the image) thus achieving a pressure of 3 Bar for each printer.

Furthermore, applicant discloses within the specification of the present case (Page 13 Lines 4-10) that drop on demand ink jet printers that operate at pressures of 3 to 5 Bar using nozzle orifices of 200 to 500 micrometers are known within the art and were commercially available at the time the present invention was made.

For the limitation of claims 8 and 10 where the cover coat is applied by a second ink jet printer, though Hales teaches applying both the image and cover coat/surface preparation material by printers (Column 2 Lines 26-35) Hale does not specifically teach that the image and cover coat are applied by two different printers.

In general, the transposition of process steps or the splitting of one step into two, where the processes are substantially identical or equivalent in terms of function, manner and result, was held to not patentably distinguish the processes. *Ex parte Rubin*, 128 USPQ 440 (Bd. Pat. App. 1959).

Though Hale does not teach that two different printer as used to apply the image and cover coat, it would have been obvious to one of ordinary skill in the art to use two different printers with the process of Hale because the end transfer product formed by the method of Hale

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would be the same whether the image and cover coat were applied by the same printer or two separate printers.

As for claims 11 and 12, they are rejected for the same reasons as were discussed above in the claim 17 and 18 rejections.

10. Claims 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hale et al as applied to claim 1 above, and further in view of Clemens (U.S. Patent # 4,066,802).

The teachings of Hale as it applies to claim 1 have been discussed previously. Though Hale teaches that the carrier sheet used in the taught method comprises paper or any other type of absorbent or porous material, Hale does not teach that carrier sheet comprises a siliconised paper or card.

Clemens teaches a method of transferring a printed image pattern from a transfer member to an article to form a permanent image by using heat (Abstract, Column 1 Lines 6-9 and Column 2 Lines 45-50). The transfer member used by Clemens is paper that has been coated with silicone, thus it is siliconised paper. Clemens teaches that siliconizing the paper provides suitable adhesive properties and temperature resistance to the paper. (Column 5 Lines 45-56)

At the time the present invention was made it would have been obvious to use a carrier sheet comprised of a siliconised paper or card. As taught by Clemens siliconised paper has improved adhesive properties and temperature resistance over non-siliconised paper, thus it would have been obvious to use siliconised paper as the carrier sheet in the method taught by Hale.

In the case of claim 22, it is rejected for the same reasons discussed above and for the same reasons that were discussed in the claim 21 rejection.

Conclusion

Claims 1 through 5, 8 and 10 through 22 have been rejected. No claims have been allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Wieczorek whose telephone number is (571)270-5341. The examiner can normally be reached on Monday through Friday; 7:30 AM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on (571)272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Wieczorek/
Examiner, Art Unit 1792

/Michael Cleveland/
Supervisory Patent Examiner, Art Unit 1792